

IN THE CLAIMS

1. (Previously Presented) A tool comprising:
a base portion including a pattern to impress the pattern on a substrate; and
a nickel layer deposited over the base portion, wherein the nickel layer has
a hardness greater than the hardness of the base portion.
2. (Original) The tool of claim 1, wherein the base portion comprises nickel.
3. (Previously Presented) The tool of claim 1, wherein the nickel layer
comprises a composite layer.
4. (Previously Presented) The tool of claim 3, wherein the composite layer
includes nickel and a reinforcement constituent chosen from the group consisting of
silicon carbide, aluminum oxide, diamond particles, and polytetrafluoroethylene
(PTFE).
5. (Previously Presented) The tool of claim 1, wherein the nickel
layer has been annealed.
6. (Original) The tool of claim 1, wherein the substrate is a package
substrate.
7. (Original) The tool of claim 1, wherein the base comprises a nickel alloy.
8. (Original) The tool of claim 7, wherein the nickel alloy is chosen from the
group consisting of a nickel-cobalt (Ni-Co) alloy, a nickel-manganese (Ni-Mn) alloy,
and a nickel-iron (Ni-Fe) alloy.
9. (Previously Presented) The tool of claim 1, wherein the nickel layer

comprises a nickel-phosphorous layer.

10. (Original) The tool of claim 1, wherein the pattern is to pattern an interconnect structure.

11-24 (Cancelled)

25. (Currently Amended) A microtool comprising:
a base portion including a pattern to pattern interconnects in a dielectric layer on a package substrate; and
~~a an electroless~~ nickel layer deposited over the base portion; the ~~electroless~~ nickel layer to increase an overall hardness of the microtool beyond that of the base portion alone.

26. (Currently Amended) The microtool of claim 25, wherein the ~~electroless~~ nickel layer is less than 10 microns thick.

27. (Original) The microtool of claim 25, wherein the base portion comprises pure nickel.

28. (Currently Amended) A microtool comprising:
a base portion including a pattern to pattern interconnects in a dielectric layer on a package substrate; and
~~an electroless~~ a nickel layer deposited over the base portion, the ~~electroless~~ nickel layer to increase an overall hardness of the microtool, wherein the ~~electroless~~ nickel layer comprises a composite including a reinforcement constituent chosen from the group consisting of silicon carbide, diamond particles, aluminum oxide, and PTFE.

29. (Currently Amended) A tool comprising:
a base portion including a pattern to impress the pattern on a substrate; and
a composite layer deposited over the base portion, wherein the composite layer includes ~~electroless~~ nickel and a reinforcement constituent chosen from the

group consisting of silicon carbide, aluminum oxide, diamond particles, and polytetrafluoroethylene (PTFE).

30. (Currently Amended) A tool comprising:
a base portion including a pattern to impress the pattern on a substrate; and
an ~~electroless~~ nickel layer deposited over the base portion, wherein the base comprises a nickel alloy chosen from the group consisting of a nickel-cobalt (Ni-Co) alloy, a nickel-manganese (Ni-Mn) alloy, and a nickel-iron (Ni-Fe) alloy.
31. (New) The microtool of claim 28, wherein the nickel layer deposited over the base portion comprises a nickel alloy chosen from the group consisting of a nickel-phosphorous alloy and a nickel-boron alloy.
32. (New) The microtool of claim 28, wherein the base comprises a nickel alloy chosen from the group consisting of a nickel-cobalt (Ni-Co) alloy, a nickel-manganese (Ni-Mn) alloy, and a nickel-iron (Ni-Fe) alloy.
33. (New) The tool of claim 29, wherein the base comprises a nickel alloy chosen from the group consisting of a nickel-cobalt (Ni-Co) alloy, a nickel-manganese (Ni-Mn) alloy, and a nickel-iron (Ni-Fe) alloy.
34. (New) The tool of claim 29, wherein the nickel layer deposited over the base portion comprises a nickel alloy chosen from the group consisting of a nickel-phosphorous alloy and a nickel-boron alloy.
35. (New) The tool of claim 30, wherein the nickel layer comprises a composite including a reinforcement constituent chosen from the group consisting of silicon carbide, diamond particles, aluminum oxide, and PTFE.
36. (New) The tool of claim 30, wherein the nickel wherein the nickel layer

deposited over the base portion comprises a nickel alloy chosen from the group consisting of a nickel-phosphorous alloy and a nickel-boron alloy.